April 29, 1969 H. M. SLAMA ETAL 3,440,754

FISHING ROD ALARM SYSTEM

Filed July 18, 1966 Sheet 1 of 2

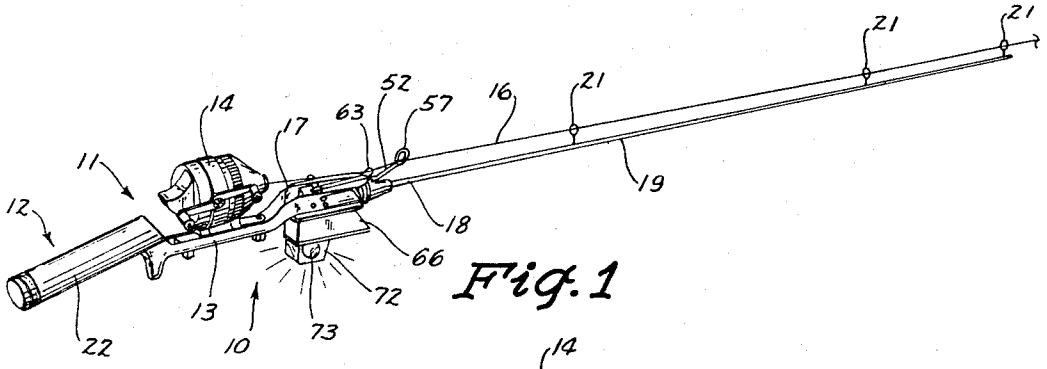



Fig. 1

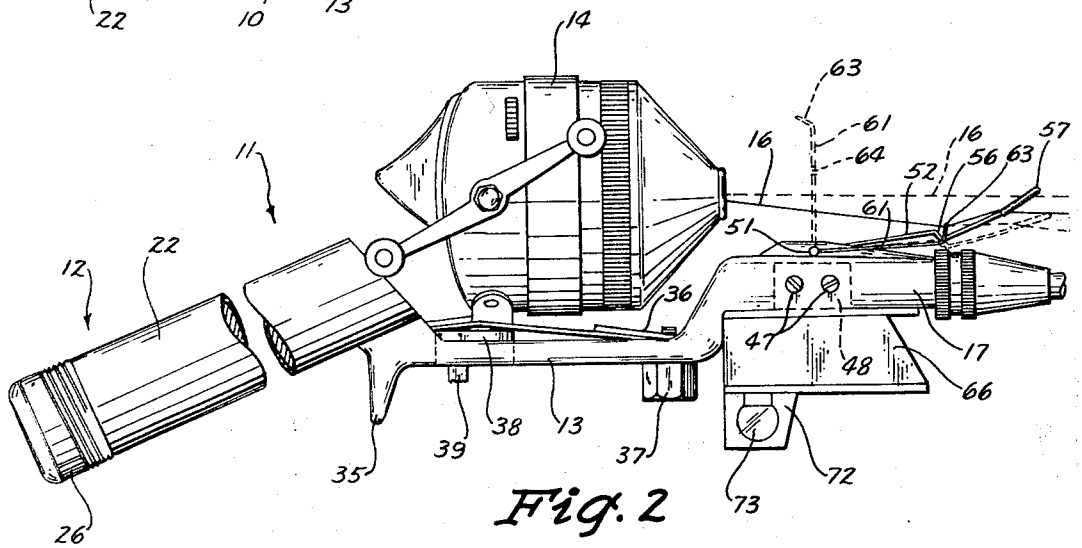



Fig. 2

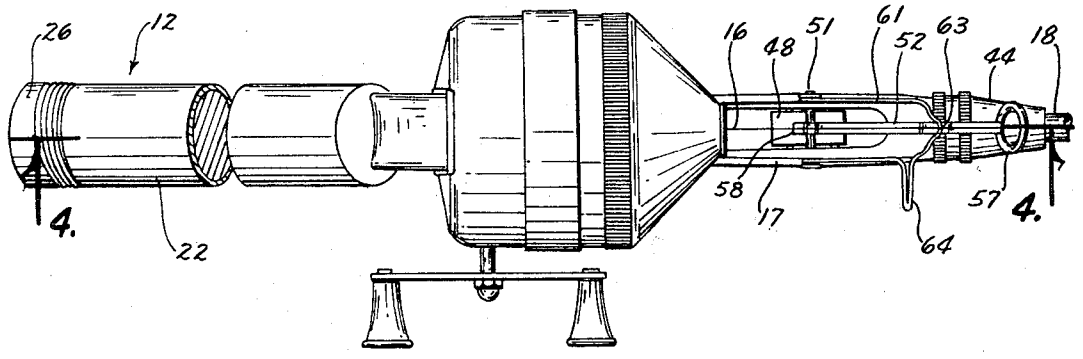



Fig. 3

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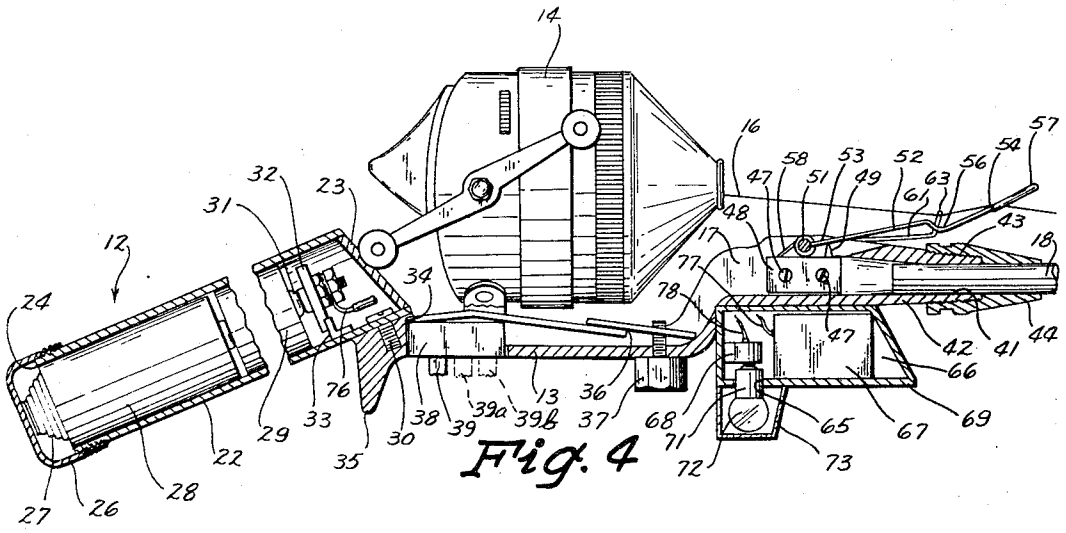



Fig. 4

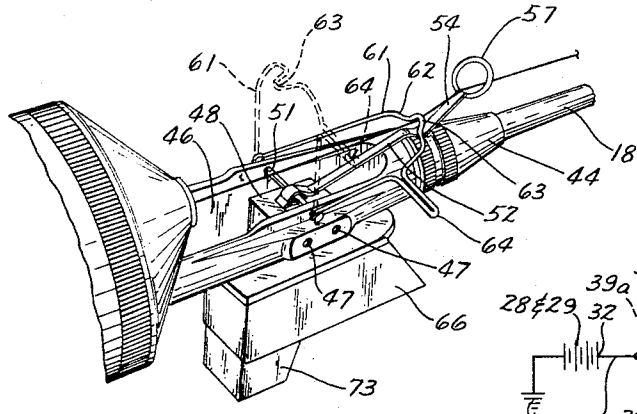



Fig. 5

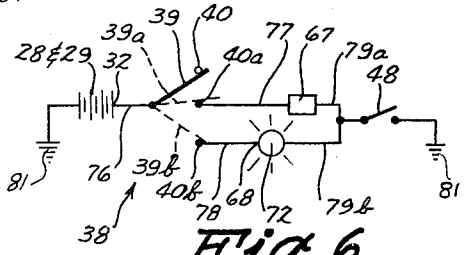



Fig. 6

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United States Patent Office 3,440,754 Patented Apr. 29, 1969



3,440,754

# FISHING ROD ALARM SYSTEM

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Filed July 18, 1966, Ser. No. 566,110
Int. Cl. A01k 97/12
U.S. Cl. 43—17 8 Claims

## ABSTRACT OF THE DISCLOSURE

An alarm system for a fishing rod which comprises a lever provided with an eye at a free end and mounted at its other end on the rod handle together with a U-shaped tensioning element also mounted on the rod handle and in a straddling position over the lever. The tensioning element is movable to a first position away from the lever and to a second position in engagement with the fishing line and closely adjacent the lever. The fishing line extends through both the tensioning element and the lever eye in substantially non-contacting relation therewith when the tensioning element is in the first position, whereby the line can be cast without restriction from the tensioning element or the lever. After casting, the tensioning element is moved to the second position whereby a pull on the line will cause the lever to activate the signal unit. The tensioning element is movable to a plurality of positions thus permitting the fisherman to regulate the sensitivity of the alarm system.

This invention relates generally to a fishing rod and more particularly to a fishing rod alarm system for emitting a signal when a fish strikes the bait.

Many alarm systems have been developed and are available to alert the fisherman when a fish strikes his line. These systems utilize lights which flash or buzzers which ring when a fish strikes; however, all of them are set after the line has been cast or placed in the water. Putting it another way, the line is first cast, and then the fisherman manually grasps the line to connect it to the alarm system.

As many fishermen enjoy fishing at night, obviously it is very difficult if not impossible to connect the line to the alarm system. Furthermore, during cold weather, when fingers are stiff or when gloves are worn, setting the commercially available alarm system can be most difficult, with the result that often times the alarm system is not utilized.

It is therefore, an object of this invention to provide a fishing rod alarm system wherein the line is always connected to and in engagement therewith thus negating the requirement of physically grasping the line to set the alarm system every time a cast is made.

Another object of this invention is the provision of a fishing rod alarm system wherein the line can be cast while in engagement with the alarm system.

A further object of this invention is to provide a fishing rod alarm system wherein the amount of tension required to activate the alarm is adjustable and compensation can be made for fishing in a strong current or where live bait is used, thus obviating the possibility of a false alarm.

A further object of this invention is the provision of a fishing rod alarm system which is substantially built into the rod handle.

Yet another object of this invention is the provision of a fishing rod alarm system wherein the sensitivity thereof to a pull on the line is adjustable.

A still further object of this invention is to provide a fishing rod alarm system which utilizes a double warning



alarm and therefore can be used at night wherein a light is energized or during the day when an annunciator is energized as a fish strikes the line.

Another object of this invention is the provision of a fishing rod alarm system wherein the electrical components thereof are maintained in a water tight condition.

A still further object of this invention is the provision of a fishing rod alarm system utilizing a switching arrangement which can either allow the signal to emit in the form of light or sound, or when desired to deactivate the system.

Yet another object of this invention is to provide a fishing rod alarm system which is economical to manufacture, extremely functional in use, and simple and rugged in construction.

These objects, and other features and advantages of this invention will become more readily apparent upon reference to the following description, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective view showing the fishing rod alarm system of this invention;

FIG. 2 is an enlarged side elevational fragmentary view of the handle end of the rod;

FIG. 3 is an enlarged top plan view of the structure of FIG. 2;

FIG. 4 is an enlarged sectional view taken along the line 4—4 in FIG. 3, excepting the conventional reel;

FIG. 5 is an enlarged, fragmentary perspective detail view, certain parts shown in alternate positions by the use of full and dotted lines;

FIG. 6 is a schematic wiring diagram of the electrical circuitry.

Referring now to the drawings, the fishing rod alarm system of this invention is shown generally at **10** in FIG. 1 as a substantially integral part of a fishing rod handle **11**. The handle **11** (FIG. 2) has a rear gripping portion **12**, an intermediate portion **13** adapted to hold a conventional reel **14** with a line **16** attached thereto, and a forward portion **17** adapted to hold the end **18** of a fishing rod **19** (FIG. 1). The rod **19** has a plurality of longitudinally spaced and aligned eyes **21** mounted thereon through which the line **16** is disposed.

The rear portion **12** (FIG. 4) comprises an elongated tubular housing **22**, having the forward end **23** closed and open at the opposite end **24** thereto. The outer surface of the housing **22**, at the opposite end **24** has threads formed thereon for threadably receiving a threaded cap **26**, thus providing a water tight cavity in the housing **22**. Mounted within the cap is a coiled spring **27**, the purpose thereof to be described hereinafter.

A pair of battery cells **28** and **29** (FIG. 4) are disposed in end-to-end relation within the cavity. The terminal **31** of the forward battery **29** contacts a contact plate **32** secured to the inner wall of the housing by a non-conductive bracket **33**. The spring **27**, acting as a ground, also maintains electrical contact between the batteries **28** and **29** and the plate **32**.

Secured to the rear portion **12** (FIG. 4), by a screw **30**, is the intermediate portion **13** having a finger grip **35**, depending therefrom, to facilitate convenient handling of the handle and rod. The intermediate portion **13** has a recess **34** formed in the rear end thereof and a clamp **36** secured thereto by a bolt **37** for holding the reel **14** in a conventional manner. A three-way switch **38**, having a slideable bolt **39** depending therefrom, is mounted on the intermediate portion adjacent the recess **34**. The purpose and action of the switch **38** will be described hereinafter.

The forward portion **17** (FIG. 4) of the handle **11**, integral with the intermediate portion **13**, has a hole **41** formed in the forward end **42** for receiving the end **18** of the rod **19**. External threads **43** are formed on the

forward end **42** for receiving an internally threaded chuck **44** which holds the rod end **18** securely to the forward end **42**.

A cavity **46** is formed in the forward portion **17** intermediate the ends thereof, as best illustrated in FIG. 5. Mounted in the cavity **46**, and held therein by a pair of screws **47** secured to the forward portion **17**, is a normally open microswitch **48** having an upstanding plunger **49** (FIG. 4) slideably mounted therein. The plunger is biased in an upstanding position and upon retracting the plunger **49** the switch **48** is closed. A pin **51**, disposed above the switch **48** and laterally spanning the cavity **46**, is mounted on both ends thereof to the walls of the forward portion **17**, as best noted in FIG. 5.

A lever **52** (FIG. 4), mounted in engagement with the plunger **49** and operable to retract, that is, push the plunger down, has one end **53** pivotally mounted on the pin **51** with the other end **54** extending forwardly from the forward portion **17**. An offset bend **56** is formed intermediate the ends of the lever **52**; and an eye **57**, adapted to slideably receive the line **16**, is formed on the other end **54**. Extending downwardly and rearwardly from the one end **53** and engageable on the outer end thereof with the top surface of the micro-switch **48**, is an arm **58** which functions as a stop to limit the pivotal movement of the lever **52**, thus holding the lever **52** in engagement with the plunger **49**.

Pivotally mounted on the pin **51** (FIG. 5) is a U-shaped tensioning element **61**, wherein the open ends are rotatably secured to the pin **51** and the closed end **62** projects upwardly between the reel **14** and the eye **57**, with the line **16** disposed between the forward portion **17** and the closed end **62**. The closed end **62** has a U-shaped offset **63** formed therein, as best noted in FIG. 5. Mounted on one side of the element **61** is an outwardly projecting finger gripping lug **64**.

Secured to the forward portion **17** and depending therefrom is a signal housing **66**, as shown in FIG. 4. Mounted within the housing **66**, at its forward end, is an annunciator **67**, and on the opposite end is mounted an electrical contact unit **68**. An opening **65** is formed in the bottom wall **69** of the housing **66**, below the contact unit **68**, adapted to receive the plug end **71** of a light bulb **72**, wherein the plug end **71** electrically contacts the unit **68**. A transparent housing **73** is removably secured to the bottom wall **69** and cover the bulb **72**.

As best shown in FIGS. 4 and 6, the contact plate **32** is wired to a three-way switch **38** by a wire **76** mounted in a suitable passage between the cavity and the switch. The switch **38** has three poles; the first **40** breaking the circuit, the second **40*a*** is wired to the annunciator **67** by a wire **77** and the third **40*b*** is wired to the contact unit **68** of the bulb **72** by a wire **78**. The wires **77** and **78** are mounted in suitable passages leading from the switch **38** to the signal housing **66**. The annunciator **67** and the bulb **72** are wired in parallel to the micro-switch **48** by a pair of wires **79*a*** and **79*b***. The micro-switch **68** is grounded to the forward portion **17**.

In operation, the line **16** (FIG. 2) is threaded between the tensioning element **61** and the forward portion **17**, through the lever eye **57** and the rod eyes **21** (FIG. 1) and attached to a lure (not shown). With the tensioning element pivoted to a stationary, upright position, as shown in dotted lines in FIG. 2, the line **16** can be cast from the reel **14**. It will be noted that both the element **61** and the eye **57** are in substantially non-contacting relation with the line **16**, and neither will offer resistance to the line as it is cast.

Upon the completion of the cast, the element **61** is grasped by the fingers at the lug **64** and pivoted to a second position, shown in full lines in FIG. 2, with the offset **63** in engagement with the line **16**. The element **61** causes the line to be deviated from a straight line path, as shown in dotted lines in side elevation in FIG. 2, to a V-shaped path shown in full lines, between the reel **14** and the eye **57**, with the line **16** in engagement with the eye **57**. The bolt **39** of the switch **38** is moved forward to a first position **39*a***, shown in dotted line in FIG. 4, wherein the annunciator **67** is wired to the batteries **28** and **29**, or to a second position **39*b***, wherein the bulb **72** is wired to the batteries.



A pull on the lure, as by the strike of a fish, will tend to cause the line **16** to attain its straight, dotted line position of FIG. 2. The element **61**, however, prevents movement of the line **16**; resulting instead in the lever **52** being pulled downwardly by the line **16** to a second position, shown in dotted lines in FIG. 2. This causes the plunger **49** (FIG. 4) to retract and the circuit between the contact **68** or the annunciator **67** and the ground **81** to be closed. The closing of the micro-switch will allow either the light to flash or the annunciator to sound depending on the positioning of the switch bolt **39**, thus warning the fisherman of the action on his line.

Neither the element **61** or the eye **57** will prevent the setting of the hook in the mouth of the fish or the reeling in of the line.

The amount of pull required to pivot the lever **52** to its second position can be regulated by properly positioning the element **61**. When the line **16** is slightly deviated from its straight line path by the element **61**, a greater pull is required to retract the plunger **49** and thus to energize the circuit. As the V-path, in side elevation (FIG. 2), becomes more pronounced a lesser pull is required to energize the circuit, thus compensation can be made if fishing in a current or when using live bait.

Although a preferred embodiment of this invention has been described and disclosed hereinbefore, it is to be remembered that various modifications and alternate constructions can be made thereto without departing from the true spirit and scope of the invention.

We claim:

**1.** A fishing rod alarm system comprising:

a fishing rod handle having a rear gripping portion, an intermediate portion adapted to hold a conventional reel with a line attached thereto, and a forward portion adapted to hold the end of a fishing rod;

signal means mounted on said handle;

lever means mounted on said handle and operably connected to said signal means, said lever means movable from a first position wherein said signal means is non-energized to a second position wherein said signal means is energized, said line threaded through an eye on the free end of said lever means in said first position in substantially non-contacting relation therewith and engageable with said lever means in said second position; and

tensioning means movably mounted on said handle, said tensioning means movable from a nonengaging position with said line to an engaging position with said line, wherein said line is deviated from a straight line path to a V-shaped path;

said lever means movable to said second position, when said tensioning means is in said engaging position, in response to a pull on said line which tends to cause said line to attain said straight line path.

**2.** A fishing rod alarm system as defined in claim **1**, and further wherein said lever means includes an elongated member having one end thereof pivotally mounted on said forward portion and having the free end thereof extending forwardly from said forward portion, wherein said line in said straight line path extends from said reel through said eye, thus allowing said line to be cast from said reel through said eye.

**3.** A fishing rod alarm system as defined in claim **2**, and further wherein said tensioning means is adapted to be engaged and moved by the fingers, and is pivotally mounted at one end thereof on said forward portion with the other end thereof disposed between said reel and said eye.

4. A fishing rod alarm system as defined in claim 3, and further wherein said tensioning means comprises a substantially U-shaped element having the open ends thereof pivotally mounted on said forward portion and the closed end thereof projecting upwardly therefrom, said line disposed between said closed end and said forward position.

5. A fishing rod alarm system as defined in claim 4, wherein said tensioning means is movable to a plurality of said engaging positions, thus requiring different degrees of pull on said line to move said lever means.

6. A fishing rod alarm system as defined in claim 5, and further wherein said signal means includes a signal element, a source of power, an electrical circuit connecting said element to said power source, and a normally open switch interposed in said circuit, said lever means operable in said second position to close the circuit and energize the signal element.

7. A fishing rod alarm system as defined in claim 6, and further wherein said element includes a lamp, an annunciator, and a second switch interposed in said circuit, said second switch manually movable to a second position to electrically connect said lamp with said power source and to a third position to electrically connect said annunciator with said power source.



8. A fishing rod alarm system as defined in claim 7, and further wherein said rear portion is formed from an elongated tubular housing having one end closed and its opposite end open, said power source comprising at least one battery, said housing adapted to receive said batteries therein, and further including a cap detachably mounted on said housing over said open end for holding said batteries therein.

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